In the specification:

At page 72, lines 15-30, please amend the paragraph as follows:

One alternative to increase both breakthrough and saturation capacities is to provide a guard bed to take care of the aromatics during the π-complexation process with Cu(I)-Y. PCB type activated carbon (AC) was chosen to accomplish this. PCB-AC is used commercially for both liquid- and vapor-phase applications including recovery of alcohols, hydrocarbons and aromatics. The present inventors performed vapor-phase single component equilibrium adsorption experiments for thiophene and diesel in PCB-AC. More benzene than thiophene was adsorbed even at pressures below 1 x 10^{-2} atm, which indicates polarizability plays an important role in the performance of this adsorbent. A similar behavior should be observed also in liquid-phase adsorption. Choma et al. studied how to predict solute adsorption behavior ~~form~~ from liquid-phase adsorption on carbons based on the corresponding gas/solid adsorption parameter, and vice-versa. Choma, J. Burakiewicz,-Mortka, W.; Jaroniec, M.; Gilpin, R.K. Studies of the Structural Heterogeneity of Microporous Carbons Using Liquid/Solid Adsorption Isotherms. *Langmuir* **2000**, *39*, 537. They demonstrated, for both types of interfaces, that similar information about the structural heterogeneity of the adsorbent can be gathered. It should be mentioned that their results were obtained for benzene as solute.

At page 75, lines 16-22, please amend the paragraph as follows:

Results have demonstrated that copper (auto-reduced) Y-type zeolites are excellent adsorbents for removal of all sulfur compounds ~~form~~ from commercial liquid fuels, based on fixed-bed adsorption experiments. Adsorbents were capable of reducing sulfur content to values less than about 1 ppmw sulfur for long periods of time. When used with a guard bed, Cu(I)-Y provides the best adsorption capacity both at breakthrough point and at saturation. It is believed the guard bed delays the aromatics concentration wave front and this allows for exclusive adsorption of sulfur entities with Cu(I)-Y zeolites.

At page 76, please amend the caption to Table 23 as follows:

Note: Data available ~~form~~ from British Petroleum (BP), 2001 TRW Summer Motor Gasoline Survey Report, and AAM Diesel Fuel Surveys.

At page 84 lines 3-32, please delete these lines in their entirety and insert the following paragraph:

A method for removing thiophene and thiophene compounds from liquid fuel includes contacting the liquid fuel with an adsorbent which preferentially adsorbs the thiophene and thiophene compounds. The adsorption takes place at a selected temperature and pressure, thereby producing a non-adsorbed component and a thiophene/thiophene compound-rich adsorbed component. The adsorbent includes either a metal or a metal cation that is adapted to form π-complexation bonds with the thiophene and/or thiophene compounds, and the preferential adsorption occurs by π-complexation. A further method includes selective removal of aromatic compounds from a mixture of aromatic and aliphatic compounds.

At page 17 please amend the paragraph beginning at line 12 as follows:

Further experiments were run with Cu(I)Y. Surprisingly, even though the results with AgY were very good, the results with Cu(I)Y were better than those of AgY. The sorbent capacity of Cu(I)Y is much higher than that of AgY, and very pure octane was obtained for extended periods of time. The sulfur capacity of Cu(I)Y zeolite was found to be about 2.55 mmol/g (or, 21.4 wt %). This is an extremely high capacity because the experiments were removing ppm levels of sulfur. <u>Cu(I)-Y (auto-reduced Cu(II)-Y) zeolites were used to separate low concentration sulfur molecules from commercial gasoline and diesel samples, at room temperature and atmospheric pressure. Substantially sulfur-free fuels were obtained with Cu(I)-Y and a combination of activated carbon (AC) and Cu(I)-Y. Activated carbon was used as a guard bed. Breakthrough and saturation adsorption capacities obtained for an influent average total concentration of</u>

335 ppmw sulfur in gasoline showed that Cu(I)-Y is capable of processing about 14.7 cm^3 of substantially sulfur-free gasoline per gram of adsorbent and removing about 1.4 wt% sulfur at saturation. When using activated carbon as a guard bed with Cu(I)-Y zeolite, the combination is capable of processing about 19.6 cm^3 of substantially sulfur-free gasoline per gram of adsorbent. In the case of diesel fuel, AC/Cu(I)-Y adsorbed about 1.08wt% and 1.85 wt% total sulfur at breakthrough and saturation, respectively. At breakthrough, the adsorbent plus guard bed is capable of processing about 34.3 cm^3 of substantially sulfur-free diesel per gram of adsorbent. GC-FPD data reveals the π-complexation adsorbents are capable of removing heavily substituted thiophenes, benzothiophenes, and dibenzothiophenes, which is not possible using conventional Hydrodesulfurization HDS reactors.